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## A photograph of a teacher-training course in marine zoology at Millport (1914)

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At a recent members' evening of Cumbrae Historical Society, James Peacock showed me an old unused postcard from his collection featuring a photograph (Fig. 1) taken at the Marine Station, Millport on 6 July 1914. The photographer, as recorded on the reverse, was George Keppie, Stuart Street, Millport.<sup>1</sup> It depicts a class of school teachers studying junior and senior courses in nature study (course number 573G; marine zoology) held during the first fortnight of July 1914. Few such early Millport class photographs exist.



**Fig. 1.** A class photograph of school teachers at the Marine Station, Millport, 6 July 1914, against a

backdrop of the, now ivy-clad, Deil's dyke. Seated in the front row (left to right) number 1, Professor L. A. L. King (St Mungo's College of Medicine, Glasgow; incorporated since 1947 into Glasgow University's medical faculty); number 3, J. G. Connell; number 5, Dr J. F. Gemmill. Number 7 may be Mr Frank W. Young, His Majesty's Chief Inspector for Schools for the West of Scotland who reported on the quality of these classes. One of the walrus-moustached, flat-cap-wearing gentleman (back row, centre) could be John Peden, the Laboratory Attendant, but which one of the two such gentlemen shown, I cannot be sure. Miss Alice Jones is likely to be one of the ladies in the front row (photograph by G. Keppie).

According to the annual report of the Scottish Marine Biological Association (SMBA, 1914: 12–13, 73) 18 students attended in July 1914: seven taking the junior course (Course I) and 11 taking the senior course (Course II). The instructors on the course were John Gibson Connell FRMS (c.1876–1946) (from Glasgow Provincial Training College; subsequently to become Jordanhill College, now the Faculty of Education, Strathclyde University), who conducted the senior course, and Dr James Fairlie Gemmill (1867–1926) (Glasgow University), assisted by Miss Alice Jones, who conducted the junior course: “much work of excellent character was accomplished, and all the students received certificates from the Glasgow Provincial Committee” (SMBA 1914: 12–13): “it is interesting to note that, while most of the teachers enrolled in these classes, were from Glasgow and the West of Scotland, two were from Aberdeen, two were from Falkirk, and one from India.”

Prizes, as a result of voluntary competition, were awarded to: Course I, 1. Jessie A. Hutcheon, Victoria Road School, Aberdeen, 2. William C. Forsyth, BSc, Glasgow; Course II, 1. Mary D. Currie, MA, Hutchesons' Girls' Grammar School, Glasgow, 2. George Nelson, Northern Public School, Falkirk<sup>7</sup>.

The students were listed (SMBA, 1914: 73) as follows: Course I (Annie E. Craib, William C. Forsyth, Jessie A. Hutcheon, Sara C. Jones, Wilhelmina M. G. Mackenzie, James Pryde, William Rowatt), Course II (Isabella Abel, Mary D. Currie,<sup>2</sup> Jemima Downie,<sup>3</sup> Georgina M'Ilvain, Lillic A. M'Ilvain, James Mather, John D. Milne, George Nelson, Annie M. Russell,<sup>4</sup> George Russell, James Shearer).

I have been able to identify only three persons by comparing Fig. 1 (see caption) with an earlier (1909?) Millport teachers' class photograph (Moore, 2008, Fig. 5). Note that over half of the students were women. Sixty-three percent of the class shown in Millport's 1909(?) photograph were women (Moore, 2008, Fig. 5). By 1911, nearly three-quarters of teachers in Scotland were women.<sup>5</sup> Between 1880 and 1914, Scottish school masters commanded higher salaries than their English counterparts, whereas Scottish school mistresses (higher in number than male teachers

across the United Kingdom) were consistently less well paid than English women teachers, although they were more highly qualified (Corr, 1997; Hulme, 2011).

#### ACKNOWLEDGEMENT

I am grateful to Mr James Peacock, Millport, for bringing this postcard to my attention.

#### NOTES

<sup>1</sup> Keppie, George (aka George Kippie) [(c.1871–1917)]. Photographers of Great Britain and Ireland, 1840–1940 (URL, accessed 17 January 2012, [http://www.victorianphotographers.co.uk/index.php/victorian-photographers-k/keppie-george-aka-george-kippie/-p\\_30356.html](http://www.victorianphotographers.co.uk/index.php/victorian-photographers-k/keppie-george-aka-george-kippie/-p_30356.html)).

<sup>2</sup> Mary Darroch Currie (1878–1936) graduated MA from Glasgow University in 1905. Isabella Blacklock (b. 1869) had been the first female to graduate MA from Glasgow University, graduating in 1895 (URL, accessed 13 January 2012, <http://www.universitystory.gla.ac.uk/alumni/help/finding-graduates/>). Women were only permitted to study at Scottish universities after 1892.

<sup>3</sup> A Jemima Wright Downie (1876–1965) graduated MA from Glasgow University in 1902.

<sup>4</sup> Annie Russell, I know, taught at Kilmarnock Academy.

<sup>5</sup> Knox, W. W., The Scottish educational system 1840–1940 (URL, accessed 12 January 2012, [www.scran.ac.uk/Scotland/pdf/SP2\\_1Education.pdf](http://www.scran.ac.uk/Scotland/pdf/SP2_1Education.pdf)).

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## Correction to the statistical note in ‘Gulliver, R., 2011. Patterns of flowering on continuously-grazed dune and machair on Colonsay. The Glasgow Naturalist 25 (3) 19–28’

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#### INTRODUCTION

The data analyses in the article on the phenology of dune and machair communities on Colonsay were correct. However the statistical note in the Methods section was incorrect. The author apologises for this error. A revised set of notes follows.

#### MAIN TEXT

*No overlap between samples; t, z and U test*

When there is no overlap between samples (that is, where all the values in one sample are greater in magnitude than all the values in the other) and the data is parametric (that is, the distribution of sample values is well approximated by a Normal distribution), the t or z test should be applied.

For sample sizes of 5 to 20 of non parametric data, and using the form of Mann Whitney U test where the lower of the two U values is the test statistic, it is advisable procedure that a test be applied. However, in these cases the outcome of operating the test is known in advance. The lower value of U will be zero. Reference to the tabulated values of U will show that significance has been obtained and that the null hypothesis can be rejected. For sample sizes of above 20 a formula exists for converting the lower U value to z (Campbell, 1974 p61). For non overlapping samples  $n_1=n_2=21$ , z has a probability of less than 0.1% using the formula. Hence a very highly significant difference will be obtained in all cases where both  $n_1$  and  $n_2$  are above 20 for non overlapping samples.

For the Mann Whitney U test some tabulated values use the higher of the two U values. Use of the lower value means there is always the same value of U which shows the maximum difference between samples i.e. 0. Use of the upper value means that the values of U associated with maximum difference between samples varies with sample size.

*Paired data: the case when the trend in every pair of values is the same throughout; paired t, paired z and Wilcoxon tests*

When the trend in every pair of values is the same throughout (i.e. the larger value in each pair always belongs to the same one of the two conditions) for parametric data (where the differences between the two values in each pair give a distribution which is well approximated by a Normal curve), the paired t, or paired z test should be applied.

Where the trend is the same throughout all the pairs of values of non parametric data, for sample sizes of 7 to 25, it is advisable procedure that a Wilcoxon test be applied. However, in these cases the outcome of operating the test is known in advance. The test statistic W (T) i.e. the lower value of R+ or R- will be zero. Reference to the tabulated values of W will show that significance has been obtained and that the null hypothesis can be rejected. For sample sizes of above